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Remarks

Claims 1-21 are currently pending in the above-captioned matter. Please cancel claim 5 and add claim 22; support for the new claim is found in the Examples. After entry of this amendment claims 1-4 and 6-22 remain pending, claims 1, 13 and 21 being independent (Applicants note that the response dated June 21, 2005 argued the patentability of claim 21, but through a clerical error recited that the pending claims were 1-20.) No new matter has been added. Support for the amendments is found at page 1, paragraph [0002.] of the specification. Remarks made herein are based on the claims as amended hereby.

Applicants respectfully acknowledge the withdrawal of the objections to claims 1 and 13 and to the drawings.

Rejection under 35 USC 103

The rejections of the prior Official Action have been maintained. With regard to each of these rejections, Applicants incorporate by reference the arguments made in the response dated June 21, 2005, and supplement them as follows.

Applicants discovered a method of making lubricated rod for heavy drawing applications, in the absence of a prior conversion coating treatment, where not only the metal forming steps, but the cleaning and lubricating steps are performed in-line, instead of batchwise. The instant invention provides an improvement over Imai, where Applicants discovered that a synthetic resin is not a mandatory component in the lubricating step of a method of cleaning, lubricating and drying, where all steps are in a continuous inline system. Applicants submit that although Imai teaches wire drawing, there is no teaching or suggestion in Imai itself of cleaning and applying the lubricant in-line.

Contrary to the Patent Office's position, the switch from batchwise cleaning and lubricating to a continuous method is not simple optimization within the skill of one of

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ordinary skill in the art. As Figure 5 of Illig et al. shows, coating thickness as a function of wire speed (time spent in the lubricant being a function of wire speed and lubricant curtain thickness) for two different lubricating coatings varies widely. Even the thickness of the same coating with and without preheating varies, and it is not simply a phase shift; the curves have different shapes. These differences in the coating thickness curves of Illig et al. show that changes in the method of application and the composition of the lubricating agent cause non-uniform changes in the coating weights. Hence forming a uniform, adherent coating of a satisfactory thickness requires experimentation that is more than simple optimization.

Claims 1, 3-5, 8 and 11 were rejected under 35 U.S. C. 103(a) as being unpatentable over Imai et al. (WO 99/64544). The rejection is respectfully traversed with respect to the claims as amended. As amended, Applicants' invention is directed to a continuous inline system of coating rod, without a chemical conversion treatment or coating, which is neither taught nor suggested by Imai et al.

Claims 1, 13 and 21 specifically claim a "continuous inline system" method. Nothing in Imai et al. teaches or suggests how one would use the compositions disclosed in a continuous inline system, or of the time required, in a continuous inline system. One must consider all of the teachings of the reference. Imai teaches cleaning times of 10 minutes which are widely different from Applicants' claimed 20 seconds or less. This is an order of magnitude difference. Likewise, the suggested lubricating time of Imai is six times longer than Applicants' 5 seconds or less. There is no teaching or suggestion of how to reduce the cleaning or lubricating time. Applicant submits that the rejection of claims 1, 3-5, 8 and 11 over Imai should be withdrawn.

Claims 1-6, 8-11, 13-14 and 16-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Imai et al. in view of U.S. Patent 4,688,411 (Hagita et al.). This rejection is respectfully traversed. Hagita is directed to a continuous drawing of wire, but uses zinc phosphating conversion coating and lubricating with a reactive soap prior to drawing. References must be taken for all that they teach and Hagita requires a chemical conversion coating prior to lubricating. This phosphating treatment changes

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the surface of the wire and any lubrication times taught by Hagita are dependent upon the presence of the phosphate coating. There is no teaching or suggestion in Hagita of an in-line coating time for a wire that is not phosphate conversion coated. Thus Hagita does not remedy the deficiencies of Imai and the rejection should be withdrawn. One cannot pick and choose the teachings of Hagita, the Patent Office must take Hagita for all that it teaches. If taken together, Imai and Hagita fail to teach or suggest the claimed invention, they teach in-line phosphating and subsequent lube coating of a wire.

Claims 7, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imai et al taken in view of U.S. Patent 4,688,411 (Hagita et al) alone or when further taken in view of U.S. Patent 5,282,377 (Illig et al.). For the reasons set forth above with regard to Imai and Hagita, Applicants respectfully submit that the claims are patentable over this combination of references. Illig fails to remedy the deficiencies of Imai and Hagita, as discussed above.

Claim 21 recites a processing liquid consisting essentially of: at least one inorganic salt, at least one lubricant selected from the group consisting of metal soaps, waxes, polytetrafluoroethylene, molybdenum disulfide, and graphite, wherein the solid matter weight ratio of said lubricant to said inorganic salt is within the range of 0.1 to 4.0. This language excludes the resins required as the main component of Imai et al. Applicant respectfully submits that the invention of claim 21 is neither taught nor suggested by the art of record. Likewise, the weight percent solids recited in claim 22 is neither taught nor suggested by any of the art of record.

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Conclusion

Applicants request reconsideration in view of the amendments and remarks contained herein. Applicants submit that the claims are in condition for allowance and a notice to that effect is respectfully requested. The Commissioner is hereby authorized to charge any required fees to Deposit Account No. 01-1250. Please direct any comments or questions regarding this amendment to the undersigned.

Respectfully submitted,



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